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APPLICANT : TOKAI CARBON CO LTD;

INVENTOR : SATO WATARU;

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TITLE : CARBONACEOUS SEPARATOR MEMBER FOR SOLID HIGH POLYMER FUEL CELL AND ITS MANUFACTURE

ABSTRACT : PROBLEM TO BE SOLVED: To provide a member that is suitable for a solid high polymer type fuel cell carbonaceous separator, has a high isotropy of its material quality, in particular, small electric resistivity and anisotropy thereof, and excellent gas impermeability and also provide its manufacturing method.

SOLUTION: This carbonaceous separator member is formed from a plate-like formed body which is made up of 100 parts by weight of graphite powder wherein synthetic graphite powder and natural graphite powder are mixed at a weight ratio of 80:20-60:40 and 10-25 parts by weight of a thermosetting resin, and has such characteristics that the average particle diameter A of the synthetic graphite powder is 50 μm or less, the average particle diameter B of the natural graphite powder is one fifth to one tenth as much as A, the electric resistivity in the surface direction is 0.02 Ωcm or less, the anisotropic ratio of the electric resistivity (thickness/surface) is two or less, gas permeability is 10-6 cc/cm2.min. In its manufacturing method, the synthetic graphite powder having the average particle diameter A of 50 μm or less and the natural graphite powder having the average particle diameter B of one fifth to one tenth as much as A are mixed at the weight ratio of 80:20-60:40, 10-25 parts by weight of the thermosetting resin is mixed in 100 parts by weight of the mixed graphite powder, they are mix-kneaded and then crushed, the crushed particles each having a particle diameter of 2 mm or less are sieved out and formed into a plate-like body by a thermocompression molding method, and it is heated and set.